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10/765,383	01/27/2004	Yung-Hsiao Lai	INTV.020A	2529	
4586				EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101			DEBELIE, MITIKU W		
ELLICOTT CI	TY, MD 21043		ART UNIT	PAPER NUMBER	
			2621		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)			
	10/765,383	LAI ET AL.			
Office Action Summary	Examiner	Art Unit			
	Mitiku Debelie	2621			
The MAILING DATE of this communication Period for Reply	appears on the cover sheet w	rith the correspondence address			
A SHORTENED STATUTORY PERIOD FOR REI	DIVIS SET TO EYDIDE 3 N	MONTH(S) OR THIRTY (30) DAYS			
WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory per  - Failure to reply within the set or extended period for reply will, by state Any reply received by the Office later than three months after the may be arrived patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNI 1.136(a). In no event, however, may a iod will apply and will expire SIX (6) MO itute, cause the application to become A	ICATION. reply be timely filed  NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).			
Status					
1) Responsive to communication(s) filed on 27	7 January 2004.				
2a) ☐ This action is <b>FINAL</b> . 2b) ☑ T	This action is <b>FINAL</b> . 2b)⊠ This action is non-final.				
3) Since this application is in condition for allow	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is				
closed in accordance with the practice unde	er <i>Ex par</i> te Quayle, 1935 C.I	D. 11, 453 O.G. 213.			
Disposition of Claims	,				
4)⊠ Claim(s) <u>1 - 56</u> is/are pending in the applica	ation.				
4a) Of the above claim(s) is/are without	Irawn from consideration.				
5) Claim(s) is/are allowed.					
6)⊠ Claim(s) <u>1 - 56</u> is/are rejected.					
7) Claim(s) is/are objected to.					
8) Claim(s) are subject to restriction and	d/or election requirement.				
Application Papers					
9)☐ The specification is objected to by the Exam	iner.				
10)⊠ The drawing(s) filed on <u>27 January 2004</u> is/a	are: a)⊠ accepted or b)□ •	objected to by the Examiner.			
Applicant may not request that any objection to t	he drawing(s) be held in abeya	ince. See 37 CFR 1.85(a).			
Replacement drawing sheet(s) including the corr	rection is required if the drawing	g(s) is objected to. See 37 CFR 1.121(d).			
11)☐ The oath or declaration is objected to by the	Examiner. Note the attache	ed Office Action or form PTO-152.			
Priority under 35 U.S.C. § 119					
12) ☐ Acknowledgment is made of a claim for fore a) ☐ All b) ☐ Some * c) ☐ None of:		§ 119(a)-(d) or (f).			
1. Certified copies of the priority docume		Application No.			
<ul><li>2. Certified copies of the priority docume</li><li>3. Copies of the certified copies of the p</li></ul>					
application from the International Bur	•				
* See the attached detailed Office action for a		t received.			
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Attachment(s)	, <b>.</b>	O			
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> </ol>		Summary (PTO-413) (s)/Mail Date			
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 05/06/2004	5)  Notice of 6)  Other:	Informal Patent Application			

## **DETAILED ACTION**

## Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 05/06/2004 has been considered by the examiner.

## Claim Rejections - 35 USC § 103

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- Claims 1, 3 12, 14 16, 19, 21 28 and 30 56 are rejected under 35
   U.S.C. 103(a) as being unpatentable over Fortin et al. (U.S. Pub. No. 2005/0278532)
   and in view of Ehrlich et al. (U.S. Pub. No. 2005/0141375).

Regarding claim 1, Fortin et al. (hereafter Fortin) discloses a multimedia playback apparatus, comprising (Fig. 1, computer 110): a cache buffer (Fig. 3, cache memory 312) that stores multimedia data, including video and audio data, read from a storage device; a cache manager (Fig. 3, controller 310) that controls said cache buffer and reads from and write to a storage device based on the memory availability in the cache buffer (see Fig. 5, steps 430 and 432, col. 8 lines 3 - 16); and a track buffer that

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stores a first amount of said multimedia data read from said cache buffer (see col. 2, lines 63 – 64). Fortin however does not disclose a cache manager that causes the causes the storage device to enter into a reduced power consumption mode when said amount of data stored in said cache buffer reaches a first level. Ehrlich et al. (hereafter Ehrlich) teaches a cache manager that causes the causes the storage device to enter into a reduced power consumption mode when said amount of data stored in said cache buffer reaches a first level (see paragraphs [0009] and [0021]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a cache manager that causes a storage device to enter into a reduced power consumption mode as disclosed by Ehrlich to the multimedia playback apparatus of Fortin in order to increase battery power on portable computers and save power on any computer (see Fortin, col. 2, lines 64 – 67).

Regarding claim 3, Ehrlich teaches a multimedia playback apparatus wherein said reduced power consumption mode idles said storage device (see paragraph [0022]).

Regarding claim 4, Ehrlich teaches a multimedia playback apparatus wherein said reduced power consumption mode spins down said storage device (see paragraph [0012]).

Regarding claim 5, Fortin teaches a multimedia playback apparatus wherein said cache manager is configured to cause said storage device to enter into a relatively higher power consumption mode when said amount of data stored in said cache buffer falls below a second level (Fig. 5, steps 430 and 432). The memory availability

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determines if data is to be moved to/from the disk drive and moving it automatically spins the disk thereby making conium high power.

**Regarding claim 6,** Fortin teaches a multimedia playback apparatus wherein said cache buffer is comprised of volatile memory (see col. 4, lines 17 – 21).

Regarding claim 7, Fortin teaches a multimedia playback apparatus further comprising said storage device (col. 1, lines 16 – 19).

Regarding claim 8, Fortin teaches a multimedia playback apparatus wherein said storage drive is an optical storage drive selected from a group including a DVD drive and a CD drive (see Fig. 1 optical disk 156).

Regarding claim 9, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus wherein said storage drive is a digital tape recorder.

The examiner takes official notice that it is old and well known in the art to use a digital video tape recorder in order to keep the multimedia playback apparatus backward compatible.

Regarding claim 10, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus further comprising a computer.

The examiner takes official notice that it is old well known in the art to use computer in order to have digitally processed media.

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Regarding claim 11, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus further comprising a set-top box.

The examiner takes official notice that it is old and well known in the art to use set-top box in order to have network connectivity thereby increasing the content received.

Regarding claim 12, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus wherein said cache manager is configured to retain an address mapping of a unit of data of said multimedia data that had been read into said cache buffer.

The examiner takes official notice that it is old and well known in the art to use configure and retain address mapping of multimedia data to facilitate storing and retrieving of the data.

Regarding claim 14, all the limitations of this claim have been analyzed in relation to claim 1 above.

Regarding claim 15, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus wherein said scan command is one of a fast forward command and a fast forward command.

The examiner takes official notice that it is old and well known in the art to incorporate fast forward command and fast reverse command in multimedia playback apparatus in order to have time shifted access to the multimedia data being reproduced.

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Regarding claim 16, this claim recites, "The method as defined in Claim 14, further comprising: receiving a second scan command; and reading said multimedia data corresponding to said second scan command from said storage device if said multimedia data corresponding to the second scan command is not stored in the multimedia cache." This claim reads on claim 1 which is analyzed above.

Regarding claim 19, claim 19 recites, "A method of processing multimedia data, comprising: determining that a storage device is reading multimedia data; transferring a first quantity of multimedia data from said storage device to a media cache; once said first quantity of said multimedia data is stored in said media cache, ceasing the transfer of said multimedia data from said storage device into said media Cache and causing said storage device to enter into a power saving mode; writing said multimedia data from said media cache to a track buffer for rendering; and at least partly in response to the quantity of said multimedia data in stored in the media cache falling to a first threshold, causing said storage device to spin up." This claim reads on claim 1 analyzed above.

Regarding claim 21, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a method wherein multimedia data is maintained in media cache after multimedia data is written to track buffer so that a user can scan the multimedia data stored in the media cache after the multimedia data is read from the track buffer and rendered.

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The examiner takes official notice that it is old and well known in the art to maintain multimedia data in cache buffer while the data is being reproduced. Limiting the intended use of the data maintained (i.e. scan) is also well known in the art.

Regarding claim 22, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a method further comprising storing a DVD menu in said media cache during playback of a movie stored on said DVD so that said DVD menu can be accessed substantially simultaneously by user.

The examiner takes official notice that it is old and well known in the art to display a DVD menu while the video is being accessed to let the user have the option of switching to different content of the video quickly.

Regarding claim 23, note the discussion of Fortin and Ehrlich in claim 1 above.

The proposed combination of Fortin and Ehrlich does not teach a method further comprising simultaneously rendering a first portion of said multimedia data in a first window and a second portion of said multimedia data in a second window, wherein said first window and said second window are visible at the same time.

The examiner takes official notice that it is old and well known in the art to display more than one window on a display device in order to take advantage of the multitasking capability of the multimedia recording and reproducing device.

Regarding claim 24, claim 24 recites, "The method as defined in Claim 19, wherein said multimedia data stored in said media cache includes data from a plurality of non-contiguous DVD regions." This claim reads on claim 23 above.

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Regarding claim 25, claim 25 recites, "The method as defined in Claim 19, wherein said multimedia data includes menu data and video data stored in said media cache at the same time." This claim reads on claim 23 above.

Regarding claim 26, claim 26 recites, "The method as defined in Claim 19, further comprising speculatively fetching data from said storage device and storing it in the media cache." This claim reads on claim 1 above.

Regarding claim 27, claim 27 cites, "transferring said multimedia data from said media cache to said track buffer." This limitation has been analyzed in relation to claim 1.

Claim 27 also recites, "said media cache has a first set of associated pointers and said track buffer has a second set of associated pointers and wherein said first set of associated pointers and said second set of associated pointers are adjusted in performing said transferring."

The examiner takes official notice that it is old and well known that multimedia data in a computer or any digital device has pointers associated to it in order to be able to manipulate the data (e.g. delete, move).

Regarding claim 28, claim 28 recites, "determining that said storage device is in the process of reading said multimedia data" This limitation reads on the claim 1 above. Caching of multimedia data in the cache buffer means reading the multimedia data from storage.

Claim 28 also cites, "subtracting a media cache current address pointer from a media cache end address pointer to produce a first difference value; comparing said

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first difference value to a predetermined value; and based at least upon said comparing, determining whether to stop transferring said multimedia data into said media cache."

The examiner takes official notice that it is old and well known in the art that it is by manipulating the address of multimedia data (i.e. incrementing, decrementing, adding and subtracting the address pointer values) that multimedia gets deleted moved or written in to storage.

Regarding claim 30, claim 30 recites, "determining that said storage device has ceased reading said multimedia data; subtracting a media cache current address pointer from a media cache end address pointer to produce a first difference value; comparing said first difference value to a first threshold value; and based at least upon said comparing determining whether to start reading said multimedia data into said media cache." This claim reads on claim 28 above. The analysis given for "determining that said storage device is in the process of reading" in claim 28 above apply for "determining that said storage device has ceased reading" in its entirety.

Regarding claim 31, note the discussion of Fortin and Ehrlich in claim 1 above.

The proposed combination of Fortin and Ehrlich does not teach a method comprising storing read error information in synchronization with said multimedia data located in said media cache.

The examiner takes official notice that it is old and well known in the art to store error correction while caching in order to analyze and correct the errors by accessing data from storage.

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Regarding claim 32, claim 32 recites, "writing multimedia data from a cache buffer to a track buffer for rendering while said storage device is idle; and at least in response to a quantity of said multimedia data stored in said media cache falling to a first threshold, causing said storage device to spin up." This limitation has been analyzed in relation to claim 1 above.

Regarding claim 33, this claim cites, "A multimedia apparatus, comprising: a cache buffer that stores multimedia data, including video and audio data; and a cache manager that manages said cache buffer, wherein said cache buffer is configured to cause a storage device to enter into a reduced power consumption mode when the amount of said multimedia data stored in said cache buffer reaches a first level". This claim reads on claim 1 above.

Regarding claim 34, all the limitations of this claim have been analyzed in relation to claim 1 above.

**Regarding claim 35,** grounds for rejecting claim 5 apply for claim 35 in its entirety.

**Regarding claim 36,** grounds for rejecting claim 4 apply for claim 36 in its entirety.

Regarding claim 37, claim 37 recites, "The multimedia apparatus as defined in Claim 33, further comprising: a start address pointer corresponding to a start of a media reading session stored in said cache buffer; and a current address pointer corresponding to a current unit of data that is transferred to a track buffer." This claim reads on claim 28 above.

Regarding claim 38, claim 38 recites, "The multimedia apparatus as defined in Claim 33, wherein said first level is selected based in part on at least one of a storage device spin up time and a storage device seek operation." The term "first" in claim 33 is understood by one who is ordinarily skilled in the art to refer to the cut off amount of the memory available in the buffer. No relation between such cut off amount and storage device seek/spin up time is explained in the specification.

Regarding claim 39, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia apparatus further comprising a visual display device, including at least one display device selected from a group comprising a television, an liquid crystal display, a plasma display, wherein the visual display device is coupled to the cache buffer and is configured to display images corresponding to said multimedia data in said cache buffer.

The examiner takes official notice that it is old and well known in the art to use any and all of the recited output devices (e.g. television) in order to output the multimedia data.

Regarding claim 40, this claim recites, "A multimedia apparatus, comprising: a write track buffer configured to store a first amount of multimedia data; a write cache buffer that caches said multimedia data from said write track buffer, wherein said write cache buffer is several times the size of said write track buffer, and wherein said write cache buffer stores said multimedia data intended to be written to a storage device; and a cache manager that causes said storage device to enter into a reduced power

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consumption mode when the amount of said multimedia data stored in said cache buffer reaches a first level." This claim reads on claim 1 above.

Regarding claim 41, all the limitations of this claim have been analyzed in relation to claim 2 above.

**Regarding claim 42,** grounds for rejecting claim 7 apply for claim 42 in its entirety.

**Regarding claim 43,** grounds for rejecting claim 3 apply for claim 43 in its entirety.

**Regarding claim 44,** grounds for rejecting claim 4 apply for claim 44 in its entirety.

**Regarding claim 45,** grounds for rejecting claim 5 apply for claim 45 in its entirety.

Regarding claim 46, claim 46 recites, "The multimedia apparatus as defined in Claim 40, wherein said cache manager is configured to write said multimedia data from said write cache buffer to said storage device at a substantially constant speed when said multimedia data in said write cache buffer is above a second level." This claim reads on claim 1 above.

**Regarding claim 47,** grounds for rejecting claim 8 apply for claim 47 in its entirety.

**Regarding claim 48,** grounds for rejecting claim 10 apply for claim 47 in its entirety.

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Regarding claim 49, grounds for rejecting claim 11 apply for claim 47 in its entirety.

**Regarding claim 50,** grounds for rejecting claim 13 apply for claim 47 in its entirety.

**Regarding claim 51,** grounds for rejecting claim 8 apply for claim 12 in its entirety.

Regarding claim 52, all the limitations of this claim have been analyzed in claims 1 and 6 above except the limitation "non-volatile" storage. Fortin teaches non-volatile storage (see col. 1, lines 16 – 19).

Regarding claim 53, claim 53 recites, "The method of processing media data as defined in Claim 52, further comprising: monitoring addresses associated with a unit of write data that is transferred from a track buffer to said cache buffer to thereby locate said write data that is to be written to said non-volatile storage device after a previously written unit of said write data; and substantially immediately after locating said write data that is to be written after a previously written unit of said write data, causing said located write data to be written from said cache buffer to said non-volatile storage device.

The examiner takes official notice that it is old and well known in the art that multimedia data, once stored, has an address associated with it and that it is using this address the multimedia data is moved from storage and back to storage, in the case of data that is to be altered.

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Regarding claim 54, claim 54 recites, "The method as defined in Claim 52, wherein said cache manager provides for the substantially concurrent writing of multiple media streams to said storage device." This claim has been analyzed in relation to claim 1 above.

Regarding claim 55, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a method of processing media data wherein said unit of write data is a sector of write data.

The examiner takes official notice that it is old and well known in the art that data art stored in units or sectors (e.g. 8 bit, 16 bit) and that they are moved or deleted a unit at a time (per clock cycle).

Regarding claim 56, claim 56 recites, "The method as defined in Claim 52, wherein said located data is to be written substantially sequentially after said previously written unit of said write data." This claim is analyzed in claim 55 above.

5. Claims 2 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fortin et al. (U.S. Pub. No. 2005/0278532) and in view of Ehrlich et al. (U.S. Pub. No. 2005/0141375) as applied to claims 1, 3 – 12, 14 – 16, 19, 21 – 28 and 30 – 56 above, and further in view of Xue et al. (U.S. Pub. No. 207/0104268).

Regarding claim 2, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus further comprising: a demultiplex circuit that receives said multimedia data

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from said track buffer; a decode circuit that decodes said multimedia data received from said demultiplex circuit to produce decoded multimedia data; and a render circuit to render said decoded multimedia data. Xue et al., from the same field of endeavor, teaches a multimedia playback apparatus further comprising: a demultiplex circuit (MULTIPLEXER 308) that receives said multimedia data from said track buffer; a decode circuit (IMAGE DECODING UNIT 309) that decodes said multimedia data received from said demultiplex circuit to produce decoded multimedia data; and a render circuit (DISPLAY UNIT 202) to render said decoded multimedia data (see Fig. 29).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention incorporate the use of multiplexer decoder and display device as taught by Xue to the multimedia playback apparatus of Fortin and Ehrlich in order to separate each multimedia into the appropriate decoder to present it to user or save it with the appropriate index.

Regarding claim 20, Xue et al. teaches a method wherein said multimedia data includes a plurality of images stored in a media cache at the same time (see paragraph [0038]). Xue however does not teach a plurality of view of one image being stored in a media cache.

The examiner takes official notice that it is old and well known in the art to store multiple view of an object being recorded in order to have more contents of multimedia data as a way of easing up editing.

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6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fortin et al. (U.S. Pub. No. 2005/0278532) and in view of Ehrlich et al. (U.S. Pub. No. 2005/0141375) as applied to claims 1, 3 – 12, 14 – 16, 19, 21 – 28 and 30 – 56 above, and further in view of Gentry et al. (U.S. PANENT Number 5,875,352).

Regarding claim 18, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus wherein said corresponding multimedia data is transferred from said cache to said track buffer by modifying a pointer value. Gentry et al., from a related field of endeavor, teaches a multimedia playback apparatus wherein the content of a cache buffer is updated by updating pointer (see 9, lines 36 – 51).

Therefore it would have been obvious to one of ordinary skill I the art at the time of the invention to incorporate the use of pointers and that data gets moved by modifying its value as taught by Gentry to the recording and reproducing device in order to be able to accomplish the data transfer using high level programming language as opposed to a printed circuit.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fortin et al. (U.S. Pub. No. 2005/0278532) and in view of Ehrlich et al. (U.S. Pub. No. 2005/0141375) as applied to claims 1, 3 – 12, 14 – 16, 18 – 28 and 30 – 56 above, and further in view of Yamamoto et al. (U.S. Pat. No. 6,532,513).

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Regarding claim 13, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus wherein said cache buffer can be dynamically modified in size. Yamamoto et al., from the same field of endeavor, teaches a multimedia playback apparatus wherein said cache buffer can be dynamically modified in size (see Yamamoto col. 7, lines 3 - 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the use of dynamic memory allocation as taught by Yamamoto to the multimedia playback of Fortin and Ehrlich in order to match the rendering capacity of the cache manager with a high speed processor.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fortin et al. (U.S. Pub. No. 2005/0278532) and in view of Ehrlich et al. (U.S. Pub. No. 2005/0141375) as applied to claims 1, 3 – 12, 14 – 16, 18 – 28 and 30 – 56 above, and further in view of Rao (U.S. Pub. No. 2002/0054309).

Regarding claim 17, note the discussion of Fortin and Ehrlich in claim 1 above, the proposed combination of Fortin and Ehrlich does not teach a multimedia playback apparatus wherein sub-band data is stored in said multimedia cache in synchronization with said multimedia data. Rao, from the same field of endeavor, teaches a multimedia playback apparatus (Fig. 3, PC 303) wherein sub-band data is stored in said multimedia cache in synchronization with multimedia data (see paragraph [0010]).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply storing of sub-band data in the multimedia cache as taught by Rao to the proposed combination of Fortin and Ehrlich in order to make the processor capable of setting priority as to what portion of a certain multimedia gets rendered before the others (see paragraph [0036]).

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fortin et al. (U.S. Pub. No. 2005/0278532) and in view of Ehrlich et al. (U.S. Pub. No. 2005/0141375) as applied to claims 1, 3 – 12, 14 – 16, 18 – 28 and 30 – 56 above, and further in view of Thompson et al. (U.S. Pat. No. 5,463,772).

**Regarding claim 29,** note the discussion of Fortin and Ehrlich in claim 1 above. The proposed combination of Fortin and Ehrlich does not teach a method wherein said storage device is accessed over a network. Thompson et al., from the same field of endeavor, teaches method wherein said storage device is accessed over a network (see col. 5 lines 37 - 47).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate use of remotely accessed storage as taught by Thompson to the method of processing multimedia by Fortin and Ehrlich.

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## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mitiku Debelie whose telephone number is (571) 270 1706. The examiner can normally be reached on Mon - Fri 8:00 - 5:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571) 272 7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MD 08/03/2007 Mehrdad Dastomi
MEHRDAD DASTOURI
SUPERVISORY PATENT EXAMINER

for Thai Tran